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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/691,088	10/18/2000	Akihiro Funakoshi	13782(JP919990178US1)	3754

7590 02/18/2004

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EXAMINER

AWAD, AMR A

ART UNIT PAPER NUMBER

2675

DATE MAILED: 02/18/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/691,088

Applicant(s)

FUNAKOSHI ET AL.

Examiner

Amr Awad

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evanicky et al. (US patent NO. 6,611,249; hereinafter referred to as Evanicky) in view of Sato (US patent NO. 5,956,006).

As to independent claim 1, Evanicky teaches a white point adjusting method for adjusting an achromatic color level to be displayed on a liquid crystal module for an input video signal including a plurality of color signals (title and abstract), comprising:

A first step of setting a white point by deciding an offset quantity of at least one color signal from a highest gray level for each color temperature (step 940 of figure 15 and col. 17, lines 53-63);

A second step of setting an offset quantity of the color signal in a direction of converging a halftone white point for each color temperature set in the first step (steps 950 and 960 of figure 15 and col. 17, line 64 through col. 18, line 13).

Evanicky does not expressly teach a third step of adjusting chromaticity on a screen of the liquid crystal module by adding the offset quantity decided in the first step and the offset quantity set in the second step to the input video signal.

However, Sato teaches a liquid crystal display apparatus, wherein an offset value is added to the offset quantity of at least one of the color (col. 11, lines 3-57).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Sato adding an offset quantity to the color signal to be applied to Evanicky's device so as motivated by Sato, to ensure fine adjusting of the display color (col. 2, lines 44-46). Such offset quantity will always assure fine adjusting regardless of the temperature of the display (if incorporated to Evanicky's display).

As to claim 2, Evanicky teaches that input video signal is composed of R, G and B color signals (step 940 of figure 15), the white point setting in the first step is executed by using a prescribed color temperature as a default value, and luminance of the R and G color signals is reduced when a color temperature is set to a high temperature side with respect to the prescribed color temperature (col. 9, line 60 through col. 10, line 4).

As to claim 3, Evanicky teaches the step of adjusting luminance of the entire video signal after white point is set (col. 4, lines 6-17).

As to claim 4, Sato teaches that offset quantity set in the second step is calculated with accuracy of bits larger in number than bits of the input video signal (col. 11, lines 19-33). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Sato having the offset quantity of bits larger than the input bits, to be incorporated to Evanicky's device so as to ensure the accuracy of the color values, and therefore, having a display with better color quality.

As to independent claim 5, the limitations in claim 5 are substantially similar to the limitations of independent claim 1 and will be analyzed as previously discussed with respect to claim 1.

As to claim 6, Evanicky teaches the step of adjusting luminance of the entire video signal after the setting of a highest gray level achromatic color. (col. 4, lines 6-17).

As to claim 7, as discussed above, Evanicky teaches that the step of setting the adjusting value is provided independently of a contrast adjustment executed by driver for driving the display panel, and the adjusting value is set on the basis of a set value when the contrast adjustment is carried out (col. 10, lines 45-67).

As to claim 8, the claim is an apparatus claim corresponding to method claims 1 and is analyzed as previously discussed with respect to claim 1.

As to claim 9, Evanicky teaches that first reference table is constituted to increase blue luminance in relative fashion when the color temperature is set to a high temperature side (col. 9, line 60 through col. 10, line 4).

As to claim 10, Evanicky teaches an inverter for adjusting the luminance of the liquid crystal display (col. 15, lines 42-47).

As to claim 11, the figures 11A-11B fairly read on the gamma curve disclosed in claim 11.

As to independent claim 12, the claim is substantially similar to the other independent claims rejected above and will be analyzed as previously discussed with respect to independent claims 1 and 5.

As to claim 13, as can be seen above, Evanicky shows that the hue value of the white color remains the same (col. 10, lines 45-67).

As to claims 14-15, Sato teaches that the adjusting means adjusts distribution of luminance among the R, G and B color signals by adding an offset quantity into originally characteristic of each of the entered R, G and B color signals, and then outputs a result thereof to the driver (col. 11, lines 7-57). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Sato adding offset quantity to be incorporated to Evanicky's device so as to ensure the accuracy of the color values, and therefore, having a display with better color quality.

Response to Arguments

3. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamada (US patent NO. 5,663,770) teaches a white balance circuit in which low light adjustment is not influenced by high light adjustment.

Engeldrum et al. (US patent NO. 5,638,117) teaches an interactive method and system for color characterization and calibration of display device.

Kunzman (US patent NO. 6,256,425) teaches an adaptive white light enhancement for displays.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703) 308-8485. The examiner can normally be reached on Monday-Friday, between 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras can be reached on (703) 305-9720. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4750.

A handwritten signature in black ink, appearing to read "Amr Awad", with a stylized flourish extending from the end.

A.A
February 11, 2004